

WHAT IS CLAIMED IS:

1. An access network system having communication nodes capable of receiving and transmitting the information disposed at a plurality of cross-points, wherein each communication node mutually constitutes an access network accessible in a cross state at the communication link and comprises an access network terminating set for terminating the access network, the access network terminating set comprising:

means for constructing a plurality of connection communication passages having a logical tree structure that hypothetically connects each communication node on said communication passages;

means for notifying all the communication nodes of the information relating to the constructed connection communication passages;

means for controlling communication traffics allotted to said plurality of connection communication passages and changing allotment conditions of communication traffics among the connection communication passages;

means for receiving the information relating to disable or enable status change from the communication node; and

means for terminating the communication processing inside said access network and executing a gateway function with an outside network.

2. The access network system according to claim 1, wherein said communication node comprises:

means for judging disable or enable status of a communication link passage connected to it;

means for notifying said access network terminating set of the judgment result of the means; and

means for receiving the information relating to the connection communication passages notified from the access network terminating set and adapting it as the route information.

3. The access network system according to claim 1, wherein said communication node comprises means for performing independently the switching of the connection communication passages when the disable or enable status of said communication link passages has changed.

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